1
00:00:01,340 --> 00:00:06,320
Good morning and welcome to this Friday's
edition of International Space Station update.

2
00:00:06,320 --> 00:00:11,020
Bringing a close to the first
week of Expedition 30's 2012,

3
00:00:11,020 --> 00:00:16,160
and they had quite a busy week doing
a number of computer hardware upgrades

4
00:00:16,160 --> 00:00:18,920
and biomedical experiments and maintenance work.

5
00:00:18,920 --> 00:00:24,510
Starting off on Monday the crew had
an off-duty day but Commander Burbank

6
00:00:24,510 --> 00:00:30,080
and Andre Kuipers did do some food
container location work in preparation

7
00:00:30,080 --> 00:00:33,800
for the SOLO experiment, SOLO
standing for Sodium Loading,

8
00:00:33,800 --> 00:00:39,740
which helps to study the mechanisms of fluid and
salt retention in the body during spaceflight.

9
00:00:39,740 --> 00:00:44,690
Andre, along with those nutrition activities,
also prepared for his Neurospat experiment

10
00:00:44,690 --> 00:00:49,770
which he would perform throughout the week
and also doing a monthly hearing assessment.

11

00:00:49,770 --> 00:00:55,610
And then Don Pettit completed his work with the
Integrated Cardiovascular experiment which looks

12
00:00:55,610 --> 00:00:59,730
at atrophy of the heart muscle, and
so he finished that and then set

13
00:00:59,730 --> 00:01:03,070
up for his Nutrition activities
for the following day.

14
00:01:03,070 --> 00:01:07,160
On Tuesday Commander Burbank continued
with the EPIC hardware upgrades,

15
00:01:07,160 --> 00:01:11,020
EPIC standing for Enhanced Processor
and Integrated Communications,

16
00:01:11,020 --> 00:01:15,270
which is a major overhaul the processor
cards in the Guidance, Navigation & Control,

17
00:01:15,270 --> 00:01:18,750
Command and Control computers onboard
the International Space Station.

18
00:01:18,750 --> 00:01:23,300
He spent about four hours on Tuesday
installing one of those cards.

19
00:01:23,300 --> 00:01:27,250
Anton Shkaplerov did some work
with the Uragan experiment.

20
00:01:27,250 --> 00:01:32,010
It is a Russian experiment that develops
a sequence of visual observations

21

00:01:32,010 --> 00:01:38,320
for the Earth's surface looking for natural and
man-made disasters whenever they are forecasted.

22
00:01:38,320 --> 00:01:42,450
Anatoly Ivanishin meanwhile on
Tuesday did some photo and video work

23
00:01:42,450 --> 00:01:47,610
of the Russian German Plasma Crystal
3 experiment which was being worked on

24
00:01:47,610 --> 00:01:51,660
and executed by fellow Russian
cosmonaut Oleg Kononenko.

25
00:01:51,660 --> 00:01:58,010
That Plasma Crystal 3 is very complex experiment
looking at wave propagation in dust plasmas.

26
00:01:58,010 --> 00:02:00,300
Meanwhile on Tuesday Andre Kuipers did some work

27
00:02:00,300 --> 00:02:04,180
with the Neurospat experiment
being assisted by Don Pettit.

28
00:02:04,180 --> 00:02:08,450
That experiment he affixed a
number of sensors to his brain

29
00:02:08,450 --> 00:02:14,550
and then using a few other mechanisms was
testing his prefrontal brain functions

30
00:02:14,550 --> 00:02:17,840
and spatial cognition, helping
to determine the effects

31
00:02:17,840 --> 00:02:20,960

of that microgravity environment
on decision-making.

32
00:02:20,960 --> 00:02:25,380
And then along that he began his own
Integrated Cardiovascular set up,

33
00:02:25,380 --> 00:02:28,410
again looking at the heart muscle's atrophy.

34
00:02:28,410 --> 00:02:30,920
Also assisting with that Neurospat experiment,

35
00:02:30,920 --> 00:02:35,920
Don Pettit did some human research
facility sample collection.

36
00:02:35,920 --> 00:02:40,150
And moving on to Wednesday, Dan Burbank
continued working with the CUCU,

37
00:02:40,150 --> 00:02:45,700
which stands for COTS UHF Communication Unit,
which will be the main source of communication

38
00:02:45,700 --> 00:02:49,030
between the International Space
Station and visiting vehicles

39
00:02:49,030 --> 00:02:53,460
from commercial resuppliers
scheduled to launch later this year.

40
00:02:53,460 --> 00:02:59,310
He also participated in a public affairs event
alongside Don Pettit and Andre Kuipers talking

41
00:02:59,310 --> 00:03:01,680
to some reporters here on the ground.

42
00:03:01,680 --> 00:03:07,570
Anton Shkaplerov did some housecleaning
work over in the Russian Zarya module,

43
00:03:07,570 --> 00:03:11,220
cleaning some filters and changing
out some ventilation screens,

44
00:03:11,220 --> 00:03:14,040
as well as beginning his
work on the BAR experiment

45
00:03:14,040 --> 00:03:16,210
which took up much of his time this week.

46
00:03:16,210 --> 00:03:19,800
The BAR experiment is a Russian
look at selection and testing

47
00:03:19,800 --> 00:03:25,400
of different detection methods for detecting
any potential depressurization onboard the

48
00:03:25,400 --> 00:03:27,580
International Space Station modules.

49
00:03:27,580 --> 00:03:31,670
Meanwhile on Wednesday, Anatoly
Ivanishin did some work on the Elektron

50
00:03:31,670 --> 00:03:35,070
or the oxygen generation
system on the Russian segment

51
00:03:35,070 --> 00:03:37,900
and also participated in that BAR experiment.

52
00:03:37,900 --> 00:03:41,840
Oleg Kononenko continued his work

the Plasma Crystal 3 on Wednesday,

53
00:03:41,840 --> 00:03:48,260
and Andre Kuipers continued his work
with the Integrated Cardiovascular,

54
00:03:48,260 --> 00:03:54,380
donning a number of sensors and cardiopress
gear, again taking his heart readings.

55
00:03:54,380 --> 00:03:58,270
Along with that Kuipers also did
some trash gathering for disposal

56
00:03:58,270 --> 00:04:04,080
on the ISS Progress 45 cargo craft, which
is scheduled to undock in about three weeks.

57
00:04:04,080 --> 00:04:07,910
Don Pettit assisted with that trash
gathering and then familiarized himself

58
00:04:07,910 --> 00:04:11,880
with the Vessel Imaging,
which he worked on today.

59
00:04:11,880 --> 00:04:16,390
Moving on to Thursday, Commander Burbank
continued with his EPIC card upgrades,

60
00:04:16,390 --> 00:04:20,310
spending the entire day in order to
replace the cards and one of the Guidance,

61
00:04:20,310 --> 00:04:24,670
Navigation & Control computers and Command
and Control computers, and he was assisted

62
00:04:24,670 --> 00:04:27,570
by Don Pettit who did a number

of cable routings,

63
00:04:27,570 --> 00:04:30,460
installing Ethernet cords for the systems.

64
00:04:30,460 --> 00:04:35,150
Meanwhile Shkaplerov and Ivanishin
continued with that BAR experiment as well

65
00:04:35,150 --> 00:04:38,990
as doing some routine maintenance
work in the Zvezda or service module

66
00:04:38,990 --> 00:04:42,380
on the Russian segment looking at
the windows ventilation system.

67
00:04:42,380 --> 00:04:45,860
And then their fellow Russian cosmonaut
Oleg Kononenko continued his work

68
00:04:45,860 --> 00:04:48,590
with the Plasma Crystal 3
for the third day in a row,

69
00:04:48,590 --> 00:04:53,360
and then also did the Seiner experiment
taking a look at the world's oceans.

70
00:04:53,360 --> 00:04:57,400
And then the last two crew members
on Thursday, Kuipers and Pettit,

71
00:04:57,400 --> 00:05:01,760
did some work on the Water Recovery
System, and Kuipers also took some time

72
00:05:01,760 --> 00:05:07,720
out to do his own media event, talking to
Dutch reporters in his native Netherlands.

73
00:05:07,720 --> 00:05:11,430
And all that brings us to today,
Friday, the last day of the week

74
00:05:11,430 --> 00:05:16,620
with Commander Burbank spending the vast
majority of his day stowing all the equipment

75
00:05:16,620 --> 00:05:21,810
from those EPIC software upgrades having
been completed and also taking some time

76
00:05:21,810 --> 00:05:28,230
out to do a public affairs event alongside Don
Pettit talking to reporters here in the US.

77
00:05:28,230 --> 00:05:33,750
And then moving onto the crew, Anton Shkaplerov
and Anatoly Ivanishin are doing a third day

78
00:05:33,750 --> 00:05:36,760
of the BAR experiment, again
looking at potential methods

79
00:05:36,760 --> 00:05:40,900
for detecting depressurization onboard
the International Space Station

80
00:05:40,900 --> 00:05:47,050
and also doing some inspection photography
work on the Zvezda or service module windows.

81
00:05:47,050 --> 00:05:52,230
Oleg Kononenko was doing some experiment work
on his own today working with the Pneumocard,

82
00:05:52,230 --> 00:05:54,540
which is a Russian experiment, kind of similar

83
00:05:54,540 --> 00:06:01,300
to that Integrated Cardiovascular you heard me
talking so much about, setting the adaptation

84
00:06:01,300 --> 00:06:04,980
of the cardiovascular system of these
crew members during their long-duration

85
00:06:04,980 --> 00:06:06,870
microgravity flights.

86
00:06:06,870 --> 00:06:11,950
He'll also be working with the Rusalka
experiment, an Earth observations experiment

87
00:06:11,950 --> 00:06:16,200
which looks to understand the role
natural processes and human activity

88
00:06:16,200 --> 00:06:21,600
and then determines the carbon dioxide and
methane content in the Earth's atmosphere.

89
00:06:21,600 --> 00:06:24,900
Andre Kuipers spending his day working on some

90
00:06:24,900 --> 00:06:29,600
of the Nano racks onboard the International
Space Station, doing some experiment routines

91
00:06:29,600 --> 00:06:35,290
with some smartphones that were recently flown
up to the station, and then assisting Don Pettit

92
00:06:35,290 --> 00:06:37,600
with some of his ultrasound activities.

93
00:06:37,600 --> 00:06:42,240
And those ultrasound activities will take

up the majority of Pettit's day today.

94
00:06:42,240 --> 00:06:47,850
He will be doing three separate scans, one on
the, one for the Integrated Cardiovascular,

95
00:06:47,850 --> 00:06:53,030
taking an ultrasound of his heart, as well as
doing something called the Sprint ultrasound,

96
00:06:53,030 --> 00:06:56,890
taking a look at the thigh and
calf muscles on the, on his leg.

97
00:06:56,890 --> 00:07:01,320
And again, studying how the muscles
have changed during spaceflight.

98
00:07:01,320 --> 00:07:04,490
His last ultrasound of the day
will be the Vessel Imaging,

99
00:07:04,490 --> 00:07:08,750
taking a look at the vessel wall
properties within his own body.

100
00:07:08,750 --> 00:07:13,760
One of those ongoing looks at the cardiovascular
functions inside astronauts during these

101
00:07:13,760 --> 00:07:15,450
long-duration spaceflights.

102
00:07:15,450 --> 00:07:20,260
The crew is scheduled to go to sleep
at about 3:30 p.m. central time today